



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,574	07/03/2003	Takeshi Ootsuka	P/2850-79	5446
2352	7590	05/04/2005	EXAMINER	
OSTROLENK FABER GERB & SOFFEN 1180 AVENUE OF THE AMERICAS NEW YORK, NY 100368403			MACARTHUR, SYLVIA	
			ART UNIT	PAPER NUMBER
			1763	
DATE MAILED: 05/04/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/613,574

Applicant(s)

OOTSUKA TAKESHI

Examiner

Sylvia R. MacArthur

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/10/2003
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishizuka Masayuki et al (JP 2001-085505) in view of Katsuda et al (US 6001760).

Ishizuka Masayuki et al teaches a susceptor and manufacture thereof.

Regarding claim 1: Ishizuka Masayuki et al teaches a susceptor 15 made of an aluminum-nitride- group sintered member see [0011]; an inner electrode 12 which is built in the susceptor member; a power supplying terminal 14 is disposed in the susceptor base member so as to be attached to the inner electrode see [0012].

Ishizuka Masayuki et al fails to teach the terminal is made of aluminum-nitride-tantalum-nitride-composite-sintered-member.

Katsuda et al teaches the interchangeability of Ta and W. Both are discussed as refractory metals with high melting points and the motivation to use tantalum instead of tungsten are known to prevent contamination. Thus, it would have been obvious for one of ordinary skill at the time of the claimed invention to use an aluminum nitride tantalum-nitride-composite sintered member instead of an aluminum nitride tungsten-nitride-composite sintered member.

Art Unit: 1763

Regarding claim 2: The mount plate 11 of Ishizuka Masayuki et al and supporting plate 13 and their material of construction are discussed in [0013].

Regarding claim 3: The internal electrode is made of aluminum nitride tungsten-nitride-composite sintered member.

See [0014].

Regarding claims 4 and 5: Section [0011] of Ishizuka Masayuki et al teaches 58-80% by weight tungsten. Recall Ishizuka Masayuki et al fails to teach Ta. Katsuda et al teaches the interchangeability of Ta and W. Both are discussed as refractory metals with high melting points and the motivation to use tantalum instead of tungsten are known to prevent contamination. Thus, it would have been obvious for one of ordinary skill at the time of the claimed invention to use an aluminum nitride tantalum-nitride-composite sintered member instead of an aluminum nitride tungsten-nitride-composite sintered member.

Regarding claim 6: The method of claim 6 is cited in sections [008]-[0010].

3. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishizuka Masayuki et al (JP 2001-085505) in view of Katsuda et al (US 6001760) as applied to claims 1-6 above, and further in view of Yamada et al (US 6134096).

The teachings of Ishizuka Masayuki et al (JP 2001-085505) in view of Katsuda et al (US 6001760) were discussed above.

Both fail to teach a green body for the mounting plate. Yamada et al teaches preparing a green body and heating the bodies to make the mounting plate and placing the electrode inside, see col. 9 lines 7-25. The motivation to use this method in combination of the


Art Unit: 1763

teachings of Ishizuka Masayuki et al (JP 2001-085505) in view of Kastsuda et al is improves mass prodcution. Thus, it would have been obvious for one of ordinary skill at the time of the claimed invention to combine the teachings of Katsuda et al with Ishizuka Masayuki et al (JP 2001-085505) in view of Kastsuda et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sylvia R. MacArthur whose telephone number is 571-272-1438. The examiner can normally be reached on M-F during the core hours of 9 a.m. and 3 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sylvia R MacArthur
Patent Examiner
Art Unit 1763

May 2, 2005